



SEQUENCE LISTING

<110> Skånemejerier AB

<120> NEW ENZYME AND ITS USE

<130> 75086

<150> US 60/320,139

<151> 2003-04-24

<150> US 60/481,598

<151> 2003-11-05

<160> 18

<170> PatentIn version 3.2

<210> 1

<211> 458

<212> PRT

<213> Unknown

<220>

<223> Human

<400> 1

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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys
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Leu Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asn Tyr Asp Gln Asp
35 40 45

Val Asp Thr Pro Asn Leu Asp Ala Met Ala Arg Asp Gly Val Lys Ala
50 55 60

Arg Tyr Met Thr Pro Ala Phe Val Thr Met Thr Ser Pro Cys His Phe
65 70 75 80

Thr Leu Val Thr Gly Lys Tyr Ile Glu Asn His Gly Val Val His Asn
85 90 95

Met Tyr Tyr Asn Thr Thr Ser Lys Val Lys Leu Pro Tyr His Ala Thr
100 105 110

Leu Gly Ile Gln Arg Trp Trp Asp Asn Gly Ser Val Pro Ile Trp Ile
115 120 125

Thr Ala Gln Arg Gln Gly Leu Arg Ala Gly Ser Phe Phe Tyr Pro Gly

130		135		140
Gly Asn Val Thr Tyr Gln Gly Val Ala Val Thr Arg Ser Arg Lys Glu				
145		150		155 160
Gly Ile Ala His Asn Tyr Lys Asn Glu Thr Glu Trp Arg Ala Asn Ile				
	165		170	175
Asp Thr Val Met Ala Trp Phe Thr Glu Glu Asp Leu Asp Leu Val Thr				
	180		185	190
Leu Tyr Phe Gly Glu Pro Asp Ser Thr Gly His Arg Tyr Gly Pro Glu				
	195		200	205
Ser Pro Glu Arg Arg Glu Met Val Arg Gln Val Asp Arg Thr Val Gly				
	210		215	220
Tyr Leu Arg Glu Ser Ile Ala Arg Asn His Leu Thr Asp Arg Leu Asn				
225		230		235 240
Leu Ile Ile Thr Ser Asp His Gly Met Thr Thr Val Asp Lys Arg Ala				
	245		250	255
Gly Asp Leu Val Glu Phe His Lys Phe Pro Asn Phe Thr Phe Arg Asp				
	260		265	270
Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro				
	275		280	285
Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His				
290		295		300
Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His				
305		310		315 320
Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu				
	325		330	335
Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu				
	340		345	350
His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala				
	355		360	365
Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser				
	370		375	380

Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
 385 390 395 400

Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr Glu
 405 410 415

Ser Ala Leu Pro Pro Asp Ala Leu Leu Val Ala Asp Gly Pro Cys Leu
 420 425 430

Pro Ser Leu Ser Gln Ala Lys Gly Cys Met Pro Leu Ser Pro Ala Ala
 435 440 445

Pro Thr Pro Ala Trp Leu Leu Trp Cys Trp
 450 455

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 <213> Unknown

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 <223> Human

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<210> 3
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<212> PRT
<213> Unknown

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<220>
<223> Human

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<400> 3

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Ala Phe Val Thr Met Thr Ser Pro Cys His Phe Thr Leu Val Thr Gly
1           5           10          15

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Lys Tyr

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<210> 4
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<212> PRT
<213> Unknown

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<220>
<223> Human
<400> 4

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Met Arg Gly Pro Ala Val Leu Leu Thr Val Ala Leu Ala Thr Leu Leu
1           5           10          15

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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys

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Val	Asp	Thr	Pro	Asn	Leu	Asp	Ala	Met	Ala	Arg	Asp	Gly	Val	Lys	Ala				
	50					55					60								
Arg	Tyr	Met	Thr	Pro	Ala	Phe	Val	Thr	Met	Thr	Ser	Pro	Cys	His	Phe				
65					70					75					80				
Thr	Leu	Val	Thr	Gly	Lys	Tyr	Ile	Glu	Asn	His	Gly	Val	Val	His	Asn				
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Met	Tyr	Tyr	Asn	Thr	Thr	Ser	Lys	Val	Lys	Leu	Pro	Tyr	His	Ala	Thr				
			100					105					110						
Leu	Gly	Ile	Gln	Arg	Trp	Trp	Asp	Asn	Gly	Ser	Val	Pro	Ile	Trp	Ile				
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Thr	Ala	Gln	Arg	Gln	Gly	Leu	Arg	Ala	Gly	Ser	Phe	Phe	Tyr	Pro	Gly				
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Gly	Asn	Val	Thr	Tyr	Gln	Gly	Val	Ala	Val	Thr	Arg	Ser	Arg	Lys	Glu				
145					150					155					160				
Gly	Ile	Ala	His	Asn	Tyr	Lys	Asn	Glu	Thr	Glu	Trp	Arg	Ala	Asn	Ile				
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Asp	Thr	Val	Met	Ala	Trp	Phe	Thr	Glu	Glu	Asp	Leu	Asp	Leu	Val	Thr				
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Leu	Tyr	Phe	Gly	Glu	Pro	Asp	Ser	Thr	Gly	His	Arg	Tyr	Gly	Pro	Glu				
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Ser	Pro	Glu	Arg	Arg	Glu	Met	Val	Arg	Gln	Val	Asp	Arg	Thr	Val	Gly				
	210					215					220								
Tyr	Leu	Arg	Glu	Ser	Ile	Ala	Arg	Asn	His	Leu	Thr	Asp	Arg	Leu	Asn				
225					230					235					240				
Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	Met	Thr	Thr	Val	Asp	Lys	Arg	Ala				
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Gly	Asp	Leu	Val	Glu	Phe	His	Lys	Phe	Pro	Asn	Phe	Thr	Phe	Arg	Asp				
			260					265					270						

Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro
 275 280 285

Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His
 290 295 300

Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His
 305 310 315 320

Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu
 325 330 335

Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu
 340 345 350

His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala
 355 360 365

Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser
 370 375 380

Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
 385 390 395 400

Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr Glu
 405 410 415

Ser Ala Leu Pro Pro Asp Gly Arg Pro Thr Leu Leu Pro Lys Gly Arg
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Ser Ala Leu Pro Pro Ser Ser Arg Pro Leu Leu Val Met Gly Leu Leu
 435 440 445

Gly Thr Val Ile Leu Leu Ser Glu Val Ala
 450 455

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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys
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Leu Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asn Tyr Asp Gln Asp
 35 40 45

Val Asp Thr Pro Asn Leu Asp Ala Met Ala Arg Asp Gly Val Lys Ala
 50 55 60

Arg Tyr Met Thr Pro Ala Phe Val Thr Met Thr Ser Pro Cys His Phe
 65 70 75 80

Thr Leu Val Thr Gly Lys Tyr Ile Glu Asn His Gly Val Val His Asn
 85 90 95

Met Tyr Tyr Asn Thr Thr Ser Lys Val Lys Leu Pro Tyr His Ala Thr
 100 105 110

Leu Gly Ile Gln Arg Trp Trp Asp Asn Gly Ser Val Pro Ile Trp Ile
 115 120 125

Thr Ala Gln Arg Gln Gly Leu Arg Ala Gly Ser Phe Phe Tyr Pro Gly
 130 135 140

Gly Asn Val Thr Tyr Gln Gly Val Ala Val Thr Arg Ser Arg Lys Glu
 145 150 155 160

Gly Ile Ala His Asn Tyr Lys Asn Glu Thr Glu Trp Arg Ala Asn Ile
 165 170 175

Asp Thr Val Met Ala Trp Phe Thr Glu Glu Asp Leu Asp Leu Val Thr
180 185 190

Leu Tyr Phe Gly Glu Pro Asp Ser Thr Gly His Arg Tyr Gly Pro Glu
195 200 205

Ser Pro Glu Arg Arg Glu Met Val Arg Gln Val Asp Arg Thr Val Gly
210 215 220

Tyr Leu Arg Glu Ser Ile Ala Arg Asn His Leu Thr Asp Arg Leu Asn
225 230 235 240

Leu Ile Ile Thr Ser Asp His Gly Met Thr Thr Val Asp Lys Arg Ala
245 250 255

Gly Asp Leu Val Glu Phe His Lys Phe Pro Asn Phe Thr Phe Arg Asp
260 265 270

Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro
275 280 285

Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His
290 295 300

Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His
305 310 315 320

Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu
325 330 335

Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu
340 345 350

His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala
355 360 365

Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser
370 375 380

Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
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Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr
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Phe Val Thr Met Thr Ser Pro Cys His Phe
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<210> 8
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Phe Val Thr Met Thr Ser Pro Cys
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<210> 9
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Pro Thr Lys Thr Phe Pro Asn
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<212> DNA
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<210> 13
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<400> 16

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<210> 18

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